

SECTION 4

Describe how for-profit network participants will pay their fair share of the network costs;

For-profit network participants are not anticipated due to the lack of such health care providers in North Dakota. However, should the issue arise; for-profit participants will need to pay all of their network construction and connection expenses.

SECTION 5

Identify the source of financial support and anticipated revenues that will pay for costs not covered by the fund

The UNDSMHS has a long history of supporting data and communication connections to its four primary campuses in Bismarck, Fargo, Grand Forks and Minot, and to the four – soon to be five – ROME site hospitals. The funds that have been expended to maintain those communication resources will be diverted to support 15% of this proposed project.

This diversion will allow the funds the medical school has been using for existing connections to be leveraged with the FCC funding to construct and maintain HCREN as a world-class high-speed communications network for health care research and education without creating additional costs for the medical school. After the first year of initial network construction, it appears that there may actually be an opportunity to even expand HCREN in subsequent years without increasing the cost to the UNDSMHS.

SECTION 6

List the health care facilities that will be included in the network

West River (Regional) Medical Center

1000 Highway 12
Hettinger, ND 58639
701-567-4561
RUCA Code (10)

Mercy Hospital

1301 15th Ave W
Williston, ND 58801
701-774-7400
RUCA Code (4)

St. Josephs Hospital

30 West Seventh Street
Dickinson, ND 58601
701-456-4000
RUCA Code (4)

Jamestown Hospital

419 5th Street NE
Jamestown, ND 58401
701-252-1050
RUCA Code (4)

Mercy Hospital

1031 Seventh Street NE
Devils Lake, ND 58301-2798
701-662-2131
RUCA Code (7)

SECTION 7

Indicate previous experience in developing and managing telemedicine programs

The UND School of Medicine and Health Sciences has a long history of utilizing technology to support its state-wide and national efforts to train health care professionals.

During its first 68 years of existence, the UNDSMHS was what was known as a two-year medical school, providing students with a strong two-year foundation in the basic sciences and then sending the students to other medical schools all over the United States and Canada for their last two years of clinical training.

When it became obvious that other medical schools would no longer be able to accept outside students due to government initiated increases in the number of medical doctors graduated each year, North Dakota was left in a very serious predicament. The state's low population density made it impossible to find any single hospital in the state that could provide a patient base sufficiently large to serve as the medical schools "teaching hospital".

Ingenuity on the part of some very creative UNDSMHS professors, administrators and North Dakota physicians developed a viable solution. A proposal to utilize hospitals all over North Dakota as UNDSMHS's unique version of a "teaching hospital" was greeted with enthusiastic acceptance by the people that accredit medical schools, the Liaison Committee on Medical Education (LCME). However, the LCME included one very important stipulation; they emphasized that every student must have the same opportunity to access a homogenous educational experience no matter where they are being trained in the state. From that day forward, distance learning or tele-education became top priority at the UNDSMHS.

In the late 70s, an early attempt at videoconferencing called Slow-Scan was implemented between the Fargo and Grand Forks campus over 56Kbs dedicated lines, but the one or two black and white pictures sent per minute were deemed to add little or no value to the audio connection, and Slow-Scan was abandoned.

In the early 80s, the UNDSMHS established and operated a 60 port telephone network that was known as the Educational Telephone Network (ETN). This network was hugely successful and was used for distance education and other purposes through 2004 when it was replaced with commercial services.

In the early 90s, the UNDSMHS implemented a satellite delivery system known as MedStar that delivered programming emanating from Grand Forks to more than 40 hospitals and healthcare providers all over North Dakota. The venerable ETN was used to establish an interactive component for the delivery system. Though some programming is still carried through this medium by one of the Grand Forks healthcare providers, Altru Health System, most of the traffic has been diverted to Internet based H.323 videoconferencing.

In 2002, the UNDSMHS inaugurated the ROME program in Hettinger, Jamestown and Devils Lake. Initially a combination of ETN, H.324 videophone technology and dial-up Internet connections were used to tie the ROME sites back into the four campus sites in Bismarck, Fargo, Grand Forks and Minot, however, as broadband Internet connections became available and more affordable they were installed at the ROME sites and H.323 videoconferencing systems were installed to take over the videoconferencing aspects of the communication between the ROME and campus sites.

The ROME project, the Center for Rural Health's SEARCH and CRISTAL projects and Family Medicine's 3rd Year Clerkship have all been major contributors of equipment for state-wide communications, and to-date the UNDSMHS administers more than 40 videoconferencing units at 27 sites around North Dakota along with a multi-point conferencing unit (MCU) which is used to hook up to 20 sites at one time and to connect into other North Dakota educational and tele-health networks.

The UNDSMHS MCU provides connectivity to virtually every part of the state and to Internet H.323 systems based anywhere in the world.

This connectivity is also used extensively to bring educational programming to health care providers all over North Dakota and to facilitate meetings that help rural and urban health care providers establish virtual collaborations to improve the quality, safety, effectiveness and efficiency of health care delivery.

Internet based videoconferencing and other Internet based applications are also used by the UNDSMHS to serve its 20+ Occupational Therapy students in Casper, Wyoming and more than 100 Clinical Laboratory Students at the Mayo Clinic in Rochester, Minnesota.

Telemedicine Business:

UNDSMHS has also used the latest communications technologies since the mid 1980s to maintain state-wide administration, billing and patient scheduling applications between its Centers for Family Medicine (Formerly Family Practice Centers), which are in Bismarck, Fargo, Grand Forks and Minot. The current applications for these purposes utilize the Internet for the necessary communications, and this has eliminated the need for expensive dedicated circuits between sites.

Clinical Telemedicine:

The UNDSMHS has hosted and implemented technologies for the psychiatric research done in Cognitive Behavioral Therapy (CBT) for treatment of bulimia nervosa through telemedicine by the Neuropsychiatric Research Institute (NRI). NRI is a non-profit organization that works closely with the UNDSMHS, and its president is the chair of the UNDSMHS department of Neuroscience.

As this telepsychiatry project has progressed over the last several years, expensive dedicated lines used for the clinical therapy comprising patient treatment in this discipline have been replaced with Internet connections and hardware employing HIPAA compliant encryption algorithms.

The UNDSMHS's Department of Computer Services also worked with the Department of Community Medicine chair and director of the Altru Hospital Diabetes Center, Grand Forks, in the design and deployment of a wireless, mobile patient examination cart which housed H.323 based videoconferencing equipment. Patient vital signs were collected and transmitted directly from patient rooms in a Grand Forks long-term-care facility to a physician at the Altru Clinic.

Finally, one of the investigators in this application, Don Larson, is currently working with the St. Alexius Hospital in Bismarck in the conversion of their tele-health network from equipment using H.320 dedicated line protocol to Internet-based H.323 protocols using HIPAA compliant encryption. (As a statement concerning potential conflict of interest, St. Alexius is not a participant nor service recipient in this application.)

SECTION 8

Provide a project management plan outlining the project's leadership and management structure, as well as its work plan, schedule, and budget.

Project Management Plan:

The management of this pilot project will be a joint agreement between the UNDSMHS, Center for Rural Health and Computer Services. The Coordinator of Computer Services (Co-Principal Investigator/HCREN Program Coordinator) will have the responsibility of all technical aspects of the

project and assistance will be solicited from the UND Information Technology Services and North Dakota's ITD when necessary.

The Principal Investigator from the Center for Rural Health will be responsible for fiscal administration; videoconference/meeting coordination; communication and information dissemination.

Member participants will be asked to provide potential research and/or educational projects for implementation on the HCREN, and a determination on which projects will be implemented will be made by the PI and the HCREN Program Coordinator, after consultation about suitability and legality with the appropriate UND, state and possibly national or international entities.

Lynette Dickson, MS,LRD - Principal Investigator

Ms. Dickson serves as the Project Director of the State Office of Rural Health(SORH) Grant program sponsored by the Health Resource Services and Administration-Office of Rural Health Policy. In her position she directs the North Dakota 'BlueCross Blue Shield Rural Health Outreach Grant program which provides support for rural HIT projects. She also serves as the planning committee chair for the Annual Dakota Conference on Rural and Public Health and as the Chair of the North Dakota HIT Steering Committee. In addition, as part of the core function of the SORH grant program, she collects and disseminates information on rural health, assists communities with grant development process, strategic planning, program development, and organizational coordination.

Don Larson, Co-Principal Investigator/HCREN Program Coordinator

Don Larson is the Coordinator of Computer Services at the UNDSMHS. In that capacity he is responsible for providing planning and support for Academic and Administrative computing at the UND School of Medicine and Health Science's ~~four~~ campuses and affiliated teaching hospitals.

He is also responsible for the design, implementation and operation of the UNDSMHS's videoconferencing resources. Those resources include 40 + videoconferencing endpoints distributed throughout North Dakota, a videoconferencing bridge, equipment to broadcast conference content and videoconferencing recording and streaming equipment.

He also does work outside of the university system with emphasis on the design and implementation of video networks and the production of technical training materials

Work Plan (See Work plan Matrix):

Upon receipt of the funding, the Coordinator, UNDSMHS, Computer Services will work with North Dakota's Information Technology Division (ITD) to install and activate the communication links comprising the HCREN.

Concurrently, the participants in the project will be informed of the HCREN startup date at their facility and their suggestions for potential electronic applications of HCREN will be solicited. Project ideas will also be solicited from UNDSMHS researchers.

As soon as potential applications are approved by project PI and Program Coordinator as described above, UNDSMHS Computer Services will work with ITD and information specialists at the proposed site to develop an implementation plan and timeline.

During the implementation process, provisions for monitoring the network related technical implications of each project will be developed and implemented in a collaborative effort between ITD,

UNDSMHS Computer Services, UND ITSS and network administrators at the project site

Schedule:

It is expected that the HCREN infrastructure should be installed and operational within **6** months of receipt of funding sources. During the installation period, the PI and HCREN Program Coordinator will confer with information specialists and researchers at member sites to determine suitable applications for HCREN.

The solicitation of project ideas will be **an** ongoing process. The PI and HCREN Program Coordinator will also identify suitable methods for collection and dissemination of research data during the network construction period. After the installation period, projects will be implemented, and data collection will begin. Upon the first anniversary of the project, the Design Study will be initiated.

Federal Communication Commission – Rural Health Care Pilot Program – Year – 1

Responsible Party	Proposed Tasks	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12
Computer Services	Coordinate the installation of network upgrades with ND ITD	√											
Computer Services and CRH	Solicit potential projects from hospitals and UNDSMHS researchers	√	√	√	√	√							
Computer Services, Hospital network Specialists	Implement approved Projects on HCREN					√	√	√	√	√	√	√	√
Computer Services Hospital network Specialists, ITD UND ITSS, CRH	Design and Implement research data measuring, gathering and archival systems					√	√	√	√	√	√	√	√
CRH, UNDSMHS clinical departments	Choose UNDSMHS and other events for broadcast to rural sites all across ND	√	√	√	√	√	√	√	√	√	√	√	√
CRH	Anecdotal summaries and observations are solicited from participants										√	√	√
CRH Computer Services	A electronic forum reporting on HCREN will be planned advertised and offered to state Health care providers						√						√

Federal Communication Commission – Rural Health Care Pilot Program – Year – 2

Responsible Party	Proposed Tasks	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12
Computer Services CRH, ITD, UND ITSS	Data from first yr research is gathered and analyzed	√	√	√									
Computer Services CRH, ITD, UND ITSS	Data from yr -2 research is gathered and analyzed					√					√	√	√
CRH	Anecdotal summaries and observations are solicited from participants	√	√	√							√	√	√
Computer Services Hospital network Specialists, ITD UND ITSS, CRH	Design & Implement research data measuring, gathering & archival systems					√	√	√	√	√	√	√	√
Computer Services, Hospital network Specialists	Implement approved Projects on HCREN and design research data gathering applications	√	√	√	√	√	√	√	√	√	√	√	√
CRH Computer Services	A electronic forum reporting on HCREN will be planned advertised and offered to state Health care providers						√						√

SECTION 9

Indicate how the telemedicine program will be coordinated throughout the state or region

The HCREN will be coordinated through the UNDSMHS Center for Rural Health in close collaboration with representatives designated by the health care providers involved in the project.

SECTION 10

Indicate to what extent the network can be self-sustaining once established.

Once the FCC Rural Health Care Pilot Program funding period has ended, the UNDSMHS will maintain its commitment to provide the communications infrastructure to its four campus locations and the ROME sites. This would be necessitated by the Liaison Committee on Medical Education's requirement for UNDSMHS's accreditation that requires a state-wide medical school like the UNDSMHS to provide equal access to educational opportunities to all medical students no matter where they are in the state.

However, elimination of the funding would require that all bandwidths provided would need to be re-examined for cost-effectiveness. Those circuits that were not being used for a cost-effective application would and should be replaced with slower and less expensive circuits. It is likely that analysis of the data gathered on applications hosted on the HCREN will prove invaluable in making the bandwidth adjustments in a fashion that would insure the least degradation in services needed.

Appendix A

Resumes – Key Staff

LYNETTE J. DICKSON, MS, LRD

826 So 23rd St
Grand Forks, North Dakota 58201
701-717-6049
e-mail-ldickson@medicine.nodak.edu

EDUCATION

North Dakota State University. Fargo, ND MS, Food and Nutrition, 1998
Internship: Grand Forks Public Health, Grand Forks School District,
Child Nutrition Program, Veterans Administration Hospital, Fargo, ND

University of Utah. Salt Lake City. Utah BS, Food and Nutrition, 1978

Professional Development:

HRSA, Office of Rural Health, HIT: A Rural Provider's Roadmap to Quality, 2006
National Rural Health Association, Skill Building Workshop, 2006
AHRQ, Annual Patient Safety and Health IT Conference, 2006
Capital Hill–Steering Committee on Health Information and Technology,
Demonstration and Presentations, 2006
ND Senator, Kent Conrad's -North Dakota HIT Summit, 2006
National Rural Health Association ("A") Annual Conference, 2003-2005
National Rural Health Association ("A") Policy Institute, 2003-2006
State Office of Rural Health (SORH) Annual and Regional Grantee Meetings, 2003-2006
National Organization of (NOSORH), Annual Meeting, 2003-2006
White House Conference for Faith Based and Community Initiatives, 2003
CDC Diabetes Translation National Conference, 1999, 2000
International Diabetes Camping Association Conference, 1998-2001
American Diabetes Association National Conference, 1998, 2001
Regional Parish Nurse Health Conference, 2000

LICENSES

North Dakota Licensed Registered Dietitian (LRD)-#855373

EMPLOYMENT

Project Director-State Office of Rural Health Grant Program. Rural Access to Emergency Devices Grant Program.
Blue Cross and Blue Shield North Dakota, Rural Health Grant Program. Chair-North Dakota Annual Dakota
Conference on Rural and Public Health.

Center for Rural Health, University of North Dakota, School of Medicine and Health Sciences, 2003-Present

North Dakota Area Program Manager/Camp Sioux Director

American Diabetes Association (ADA), serving North Dakota and northwestern Minnesota, 1995-2003

Nutritional Consultant. NuGrain Products, Co. Harvey, ND. 1994.

Marketed nutritional aspects of cereal and bread products at state and national trade shows.
Conducted product education and sales promotional activities through direct contacts with
decision makers in healthcare facilities, school food service, and grocery distribution industry.

PROFESSIONAL and ACADEMIC SERVICE:

Board of Directors and Advisory Councils:

National Organization of State Office of Rural Association (NOSORH) – Current Board Member
University of Minnesota, Midwest Center for Life-Long-Learning in Public Health,
Rural Health Liaison, 2005-present
International Diabetes Camping Association, Board of Directors, 2003
North Dakota Department of Health-CDC-Diabetes Control Program, 1999-2002

Migrant Health Diabetes Program, 2000-2002
North Dakota Diabetes Youth Outreach, 1996-2001
University of Minnesota, Crookston, Dietetic Technician Program, 1997-2001

Committee Member:

ND HIT Steering Committee - Chair, present
Regional (NW), HIT Technology Summit (2007) Planning Committee, present
National Rural HIT Conference (2007) Planning Committee, present
National Rural HIT Coalition, present
Senator Kent Conrad -- ND HIT Summit, Planning committee and facilitator, 2006
National Organization of State Offices Rural Health, (NOSORH) committees
HIT, EMS, Nominating, Communications and Finance, present
HRSA, OAT, Telehealth Network Grant Review Panel, 2006
HRSA, ORHP, Network Development Grant Review Panel, 2003-2005
Network Development Planning Grant Review Panel, 2004, 2005
Small :Hospital Improvement Program Grant Review Panel, 2005
North Dakota Blue Cross Blue Shield Rural Health Outreach Grant Review Committee, 2004-present
Dakota Conference on Rural and Public Health, (2003-2004, member; 2005 -present, Chair).
HRSA, OR", State Office Rural Health (SORH)
Grant Guidelines Committee, 2003
GPRA Guidelines for SORH Grantees Committee, 2003
Greater Grand Forks Area Chamber of Commerce-Health Trip Committee, 1996-1998
North Dakota State University, University Senate, 1995-1997
North Dakota State University, Department of Food and Nutrition
Graduate Committee, 1994-96
Department Chair Search Committee, 1996

Professional Membership:

National Organization of State Offices of Rural Health-Current Board member
National Rural Health Association
Greater Grand Forks Dietetic Association-Past President
North Dakota Dietetic Association-Past State Board member
American Dietetic Association
Dietetic Professional Practice Groups-
Sports, Cardiovascular and Wellness Nutrition
Diabetes Care and Education practice group
Nutrition Entrepreneur
International Diabetes Camping Association --Past Board Member
American Camping Association

Presentations:

"Lessons learned from Office of Performance Review Process" and "Jim Bernstein Mentoring Program" NOSORH Annual Meeting, Portland Maine, September, 2006.
"Center for Rural Health Overview", North Dakota Health Information Management Association, Annual Statewide Conference, Fargo, 2006.
"Community Development Tools for Decision Making and Rural Health Dialogues: Innovative Patterns to Partnership with Communities" National Rural Health Association Annual Conference, Reno NV, May, 2006
"A Survey of Leading Rural Telehealth and Health IT Programs of the Pacific Northwest"(panel presentations), Connecting Rural Health Communities Through Information Technology Conference, Butte MT, October, 2005.
"Fundamentals of Grant Writing", Richardton, September, 2004; Long Term Care Association of North Dakota, Bismarck, September, 2004; Cavalier, February, 2005; Turtle Mountain Community College, Belcourt, June 2005; Little Hoop Community College, Fort Totten, June, 2005; Hettinger, 2005; State EMS Conference, 2006.
"Strategic Planning Workshop", (with Brad Gibbens), Hatton, January, 2005; Cavalier, February, 2005.

“Strengthening Rural Health Care Facilities Through Community Development” (with Marlene Miller and Lynette Dickson), presented as concurrent session at Dakota Conference on Rural and Public Health, Bismarck, ND, March, 2005.

Other healthcare professional, student and community workshops to include:

Northland Health Care Alliance-rural health clinics and numerous clinics and community events statewide. UND--College of Nursing & Family Medicine, Grand Forks - Community Wellness Fair, University of Minnesota, Crookston, MN; Concordia College, Moorhead MN; NDSU; Northland Technical College, East Grand Forks, MN.

ND Senator Byron Dorgan’s-Women’s Wellness Conference, 2000,2002,2004

International Diabetes Camping Association Conference, 2001

North Dakota Dietetic Association State Convention, Spring 1996, 1998,2004

Chicago Area American Diabetes Association, patient workshop, 1998

Poster Presentations:

American Dietetic Association, National Meeting- 1998

Centers for Disease Control, Diabetes Translation National Conference- 2001

Publications, Articles and Reports:

The “Good Neighbor Project” Focus on Rural Health. (Vol. 21. No. 2, Summer, 2005). UND Center for Rural Health, Grand Forks, ND.

Rural Health Grant Development Process Guide, Center for Rural Health, UNDSMHS, September, 2005.

Bottineau Community Wellness Survey – Results Report, Center for Rural Health, UNDSMHS, Grand Forks, ND. August, 2004.

Langdon Community Wellness Survey – Results Report, Center for Rural Health, UNDSMHS, Grand Forks, ND. September, 2004.

AWARDS

National Organization of State Offices of Rural Health, “Distinguished Service Award, 2006

American Diabetes Association-North Central Region, “Passion for Making a Difference” Award, 2000

City of Gilby, North Dakota, Community Service Award, 1992

COMMUNITY INVOLVEMENT

Sharon Lutheran Church, Board of Church in Society, 2006

International Student, Host Family, 2000-2002

Junior Achievement Program,,Grand Forks Public Schools, 2001

Don Larson
Coordinator Computer Services
UND School of Medicine and Health Sciences

1989 - Present Employed by the University of North Dakota School of Medicine & Health Sciences in the department of Computer Services.
Functional title: Coordinator of Computer Services.

In role as Coordinator of Computer Services:

Responsible for providing planning and support for Academic and Administrative computing at the UND School of Medicine and Health Science's four campuses and affiliated teaching hospitals. Support includes working with the wide area network for education and the administrative arm of the Medical School. The implementation of that wide area network includes Local Area Networks (LANs), gateways, routers, bridges and remote control units to connect LANs at all of the campuses to each other and to a School of Medicine mini-computer used for billing and scheduling at the medical schools state-wide family practice clinical sites.

Responsible for providing communications support for the medical school. My specific responsibilities are for the design, installation, operation and support of the UND School of Medicine and Health Science's videoconferencing resources. Those resources include more than 40 Internet based videoconferencing endpoints distributed throughout North Dakota, the medical school's multipoint videoconferencing unit (videoconferencing bridge) connected to the commercial Internet as well videoconferencing recording and streaming equipment, and associated content delivery mechanisms. Some of these resources are in other states.

Responsible for designing, implementing and supporting computer learning stations and labs at the remote campuses and some of the affiliated teaching hospitals around the state. Provisions have been made for support and maintenance of these stations over the Internet.

Project - Designed and implemented the computer component of the School of Medicine's MedStar Satellite Network. Provisions were been made for remote support and maintenance of the installed computer component at the MedStar hospital sites, and provisions for connections into the Internet were included in the design and implementation.

Project-Taught PC 101, the first interactive class on the MedStar Network. PC 101, a course dealing with the use of Windows and various Windows applications, drew the largest enrollment ever recorded for a class offered by North Dakota's Higher Education institutions.

Independent Project – Designed and implemented the North Dakota Health Care Review's videoconferencing network for the Long Term Care Improvement Project. Implementation included 19 videoconferencing endpoints all over North Dakota with suitable connections into the commercial Internet and a videoconferencing bridge at the telecommunications network operating center in Ray, ND.

1994 - 96

Independent Project – Technical consultant and content advisor for Prairie Public Broadcasting's AG-10 Computer Education project..

Independent Project – Technical consultant and grant writer for Thief River Falls Community Telecommunications Strategic Planning Task Force.

Independent Project – Served as technical consultant and implementer for the North Dakota Hospital Association Foundation's Ladders in Nursing Careers (LINC of North Dakota) program. "L.I.N.C. became a state leader in distance learning — assisting schools and students to utilize technology to increase access to nursing education. To do so, North Dakota Project L.I.N.C. overcame turf barriers to adopting distance education technology, linking students to specific schools, and allocating financial aid resources to non-traditional students taking courses at more than one nursing program."

Implementations included training materials, Internet connections to rural areas, e-mail access and a laptop computer program.

1988 - 96 Professor of Mathematics, Embry-Riddle Aeronautical University, College of Continuing Education. Taught Embry-Riddle's curriculum for Aviation Mathematics - Elements of algebra, trigonometry, analytic geometry, calculus and statistical analysis and their applications to aviation.

1972 - 88 Taught high school **and** adult classes in math, aviation, physics and computer programming at Midway High School Inkster, North Dakota.

Constructed and maintained Local Area Networks (LANs) in the Midway School District's computer labs. The first, a crude network in 1981 and a second, more sophisticated CSMA/CD Corvus network in 1986. Full year courses in math and English communications were available on the network at all times.

Taught a number of computer languages in high school, (BASIC, Pascal 6502 assembler APL, FORTRAN and others). Members of my Midway Computer I and Computer II programming classes were very competitive in area computer programming contests, and in State and International Science Fairs with computer robotics projects and other computer related projects. To this day, I am very proud of them.

Worked with Midway Board of Education to develop very successful curriculums in mathematics, computer science and aviation, and shared those math and computer curriculums with other teachers as a presenter at North Dakota Education Association conventions.

1970 - 72 Taught high school math and physics at Drake High School, Drake, North Dakota.

1968 - 85 Graduate work in mathematics and aviation at Moorhead State University and North Dakota State University

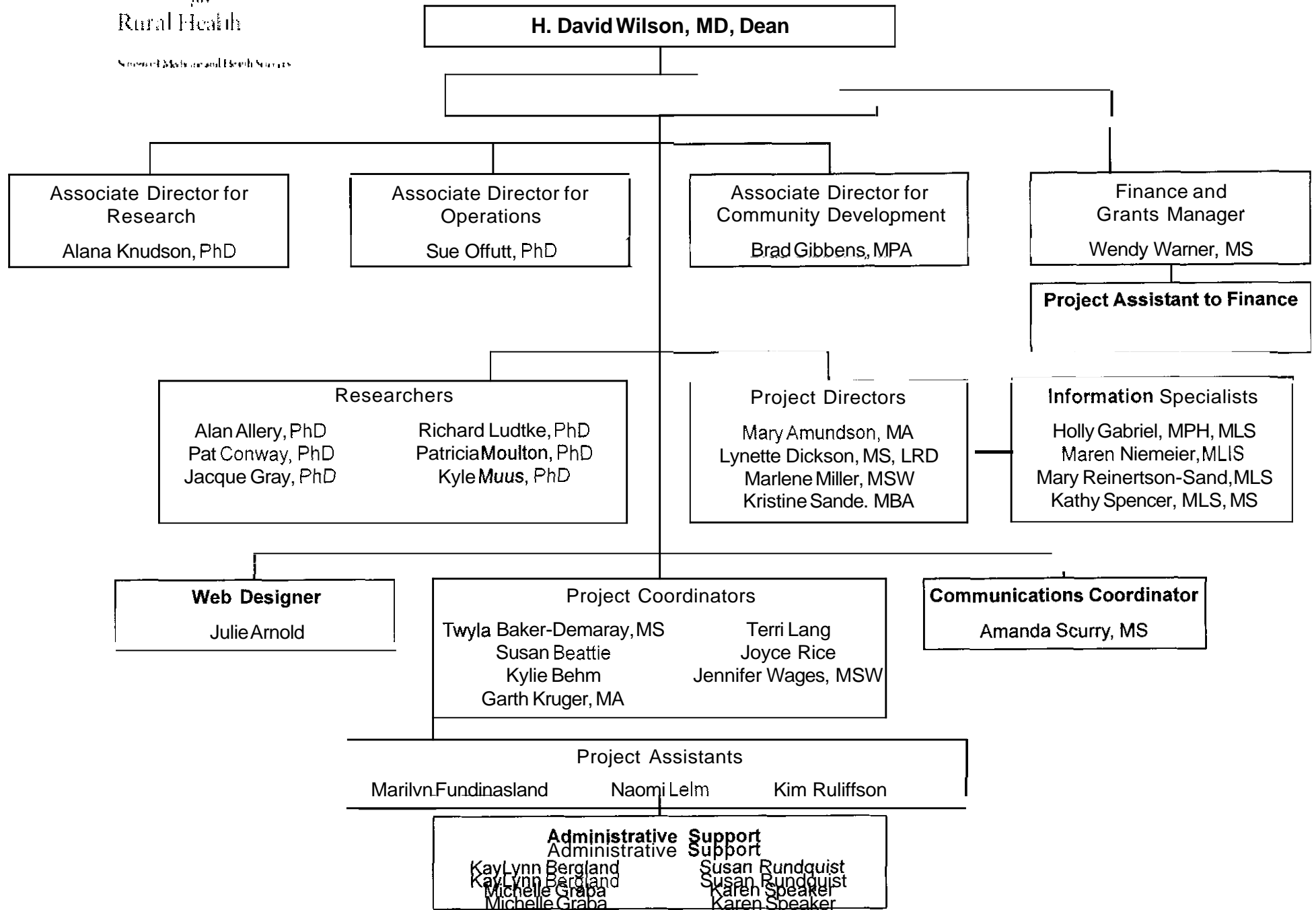
1967 - 68 Graduate Teaching assistant in Mathematics at the University of North Dakota

1967 B.S. in education, Mayville State College, Mayville, ND

Born and raised in rural Niagara, North Dakota

Appendix B

Center for Rural Health Organizational Chart



Appendix C

Letters of Support:

Senator Kent Conrad
Department of Family and Community Medicine (UNDSMHS)
Neuropsychiatric Research Institute
Department of Clinical Neuroscience
Mercy Medical Center, Williston

KENT CONRAD
NORM DAKOTA

website: <http://Nconrad.senate.gov>

COMMITTEES:
BUDGET, CHAIRMAN
AGRICULTURE, NUTRITION, AND FORESTRY
FINANCE
INDIAN AFFAIRS

United States Senate

May 3, 2007

1-800-223-4457

530 HART SENATE OFFICE BUILDING
WASHINGTON, DC 20510-3403
(202) 224-2043

220 EAST ROSSER AVENUE, ROOM 228
BISMARCK, ND 58501-3866
(701) 258-4648

657 2ND AVENUE NORTH, ROOM 306
FARGO, ND 58102-4727
(701) 232-8030

102 NORTH 4TH STREET, SUITE 104
GRAND FORKS, ND 58203-3738
(701) 775-9601

100 1ST STREET, S.W., ROOM 105
MINOT, ND 58701-3846
(701) 852-0703

Mary Wakefield
Director
UND Center for Rural Health
501 North Columbia Road
Box 9037
Grand Forks, ND 58202-9037

Dear Mary:

It is my pleasure to support the grant proposal developed by the University of North Dakota (UND) Center for Rural Health to create the Health Care Research and Education Network. This vitally important proposal will help connect facilities across North Dakota to improve access to health care in rural areas and facilitate important health research.

As you well know, North Dakota is one of the most rural and underserved states, and we face tremendous challenges in meeting our health care needs. 68 percent of our counties are classified as frontier, and nearly 83 percent of the counties are Health Professional Shortage Areas. This makes accessing health care difficult, and we must begin to find creative ways of addressing these problems.

The Health Care Research and Education Network could serve as an important starting point. Connecting the UND School of Medicine and Health Science's four main campus sites (Grand Forks, Minot, Bismarck, and Fargo) and their satellite clinical sites (Jamestown, Dickinson, Williston, Hettinger, and Devil's Lake), the high-speed data Network will educate medical students in rural areas and facilitate important health research.

Encouraging students to practice in rural areas is extremely challenging, and programs like the UND Rural Opportunities in Medicine program and the Student/Resident Experiences and Rotations in Community Health program play an important role. However, more work is needed to bring medical professionals to rural and remote areas. The Health Care Research and Education Network would offer connectivity for use in continuing education or ancillary services otherwise not available in these areas. Moreover, the Network will provide students with access to important data that could be helpful in health research. Finally, I commend the Center for its intent to conduct a connectivity assessment for all of North Dakota's 39 rural hospitals. This will serve as a test bed to inform other health care entities in the state on the most appropriate use of high-speed network technologies in the adoption of health information technology and, more specifically, electronic medical records.

Again, I commend your efforts and look forward to our continuing partnership in improving access to health care in rural North Dakota.

Sincerely,



KENT CONRAD
United States Senator

May 3, 2007

SCHOOL OF MEDICINE & HEALTH SCIENCES
DEPARTMENT OF FAMILY MEDICINE
501 NORTH COLUMBIA ROAD
P.O. BOX 9037
GRAND FORKS, NORTH DAKOTA 58202-9037
(701) 777-3200
FAX: (701) 777-3849

Mary Wakefield, Ph.D.
Director, Center for Rural Health
University of North Dakota School of Medicine and Health Sciences

Dear Dr. Wakefield:

I am writing in strong support of the proposal coming from your Center to obtain support to construct a "Health Care Research and Education Network."

The Department of Family Medicine is developing a primary care research network in North Dakota ~~and~~ adjacent areas; this network, called NORTHSTAR, will address quality improvement in the setting of rural practice. An essential infrastructure element for this activity is an excellent communications system among the practice sites, health institutions in the state, and the medical school; high-speed data links are a critical part of this infrastructure... The modernization of existing links to state-of-the-art standards will be very helpful in conducting the work of NORTHSTAR.

I strongly support this project and hope that you are successful in obtaining the funding you have requested.

Sincerely,



Charles E. Christianson, M.D., Sc.M.
Associate Professor, Family Medicine
Director, NORTHSTAR



Tele: 701-293-1335
Fax: 701-293-3226

Neuropsychiatric Research Institute
700 FIRST AVENUE SOUTH
FARGO, NORTH DAKOTA 58107

P.O. Box 1415

May 2, 2007

University of North Dakota
Center for Rural Health
School of Medicine and Health Sciences
501 N Columbia Rd. Stop 9037
Grand Forks, North Dakota 58201

Re: FCC Rural Pilot Program

To Whom It May Concern:

The Neuropsychiatric Research Institute (NRI) enthusiastically endorses the University of North Dakota School of Medicine and Health Sciences (UNDSMHS) Center for Rural Health's proposed construction of a high-speed data network, Health Care Research & Education Network (HCREN), to connect the UNDSMHS four main campus sites and its own clinical medical sites to several rural health care facilities in North Dakota.

This initiative addresses chronic shortfalls in medical services available to rural areas in North Dakota. Additionally, the proposal will partner with non-profit organizations, like NRT to develop outreach mechanisms that will make therapies, currently unavailable, accessible by rural areas throughout the United States.

NRI applauds the forward thinking of the Center for Rural Health, and we pledge our support in the fruition of its goals.

Sincerely,



Ronald J. Erickson
V.P. for Administration

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May 3, 2007

Don Larson
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501 N. Columbia Road Stop 9037
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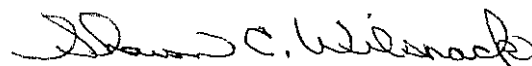
Dear Don:

I am writing to enthusiastically support your application to the Federal Communication Commission for a Rural Health Care Pilot Program to support the construction of a high-speed data network, the Health Care Research and Education Network (HCREN).

As you know, I direct two large research projects. One is a 20-year longitudinal study of drinking and problem drinking in a large national sample of U.S. women. This study has been funded continuously since 1980 by the National Institute on Alcohol Abuse and Alcoholism/ National Institutes of Health. The second project, also funded by NIAAA/NIH, is a multinational study of gender, alcohol, and culture that presently includes more than 40 countries in Africa, Asia, Latin America, Europe, North America, and Australia. The high-speed performance that is characteristic of international Internet 2 connections would greatly facilitate our UND team's video communication with our research collaborators throughout the world, as well as supporting our need for frequent videoconferencing with members of our U.S. project team who are located in Texas and California.

If you need any additional information about either of these projects and our national and international communication needs, please let me know. Best wishes for success in obtaining funding for the HCREN network, which will greatly enhance the health care, research, and education missions of our institution.

Sincerely,



Sharon C. Wilsnack, Ph.D.
Chester Fritz Distinguished Professor



Mercy Medical Center

2007 May 03

Don Larson
Computer Services
University of North Dakota
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RE: FCC Rural Pilot Program Grant Application

Don –

I wish to extend my support for your proposed grant application to construct a high speed data network connecting the UND School of Medicine with rural healthcare facilities in North Dakota.

As we have discussed in the past, the challenges of delivering healthcare services in the rural setting of North Dakota are many. As technology professionals, any opportunity we have to enhance the delivery of these services to the population we serve must be strongly considered. As always, funding is a significant challenge, and I applaud your approach to seek grant funds for this proposal.

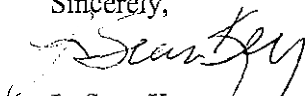
I have been pleased with the successful implementation of the DSL data circuit installed at Mercy Medical Center in Williston, which enables the UND School of Medicine ROME students to gain experience in an actual hospital setting while maintaining appropriate communication and live progress reports with their instructors in Grand Forks.

I expect the high speed network to be constructed as outlined in this proposal to further enhance that capability, while also enabling many additional healthcare services to be established and research to be conducted. Not only will physicians in training benefit, the participating hospitals, and as a result the populations we serve, will benefit as well.

Once technology solutions for healthcare have been implemented, one of the challenges is to maintain the functionality of those solutions. Oftentimes, this gets overlooked. Because of cost, redundancy is frequently not built into these systems, and a single point of failure can cause disruption to an entire service. I anticipate that the Health Care Research and Education Network being proposed will enable hospitals like Mercy to utilize this technology to add much needed redundancy.

I look forward to the opportunity to work with you, and lend my wholehearted support to your project.

Sincerely,



L. Sean Key
Director of Information Technology
Mercy Medical Center
1301 15th Avenue West

Appendix D

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References

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